

**701—77.4(428,433,437,438) Stock and debt approach to unit value.**

**77.4(1)** The stock and debt approach to unit value estimates the market value of the operating property by combining the market values of the common stock, preferred stock, debt, current liabilities, other liabilities, leases, and deferred credits associated with the operating property of the utility company, on the basis that the market value of these items may be used as a surrogate for the market value of the operating property itself.

**77.4(2)** The market value of the long-term debt associated with the operating property shall be calculated by first determining a ratio, based on book values, whose numerator shall be the operating property and whose denominator shall be the total property of the utility company. This ratio shall then be multiplied times the gross market value of the long-term debt and the result obtained shall be the market value of the long-term debt associated with the operating property. The market value of publicly traded debt shall be determined by utilizing an average of the monthly high and low value of the debt for the 12 months preceding the valuation date. The values to be utilized shall be obtained by reference to any acceptable reporter of the market on which the securities are traded. If all or some of the securities are not publicly traded, the value of the securities shall be determined by appropriate comparable securities. The comparable securities shall be publicly traded and shall have a similar maturity date and coupon rate, as well as risk indicators similar to the untraded security. In each instance, the utility company shall provide the department a statement of the market value of all securities and an explanation of how that market value was derived, including the identity of any comparable securities utilized. In the event that any utility is unable to utilize the foregoing rule to value its securities, it may provide the department with its own determination of the fair market value of its untraded securities together with a complete explanation of why the foregoing rule was not used and a detailed explanation of the method used.

**77.4(3)** The market value of the preferred stock associated with the operating property shall be calculated by first determining a ratio, based on book values, whose numerator shall be the operating property and whose denominator shall be the total property of the utility company. This ratio shall then be multiplied times the gross market value of the preferred stock and the result obtained shall be the market value of the preferred stock associated with the operating property.

The market value of publicly traded shares of preferred stock shall be determined by utilizing an average of the monthly high and low value of the preferred stock for the 12 months preceding the valuation date. The values to be utilized shall be obtained by reference to any acceptable reporter of the market on which the preferred stock is traded. If all or some series of the preferred stock are not publicly traded, the value of such preferred stock shall be determined by appropriate comparable securities. The comparable securities shall be publicly traded and shall have the same or a similar dividend rate, as well as risk indicators similar to the untraded preferred stock. In each instance, the utility company shall provide the department a statement of the market value of its preferred stock and an explanation of how that market value was derived, including the identity of any comparable securities utilized. In the event that any utility is unable to utilize the foregoing rule to value its securities, it may provide the department with its own determination of the fair market value of its untraded securities together with a complete explanation of why the foregoing rule was not used and a detailed explanation of the method used.

**77.4(4)** The market value of the common equity of a utility company associated with the company's operating property shall be determined by capitalizing the income available to the common equity holders from the operating property, by an appropriate common equity return rate, all of which shall be determined as follows:

*a.* The calculation of the income to be capitalized shall begin with the utility company's net income after taxes but before interest charges and preferred dividends for the 12-month period preceding the valuation date. The net income after taxes, but before interest charges and preferred dividends, shall be determined from the utility company's regulatory report, or if no regulatory report is filed, from the audited financial statements of the utility company. In the event that the respondent has no income or has negative income, an alternative method may be utilized to estimate the market value of the common equity.

*b.* For rate base regulated companies which do not earn a return on construction-work-in-progress, the income determined in subrule 77.4(4) shall be increased by the amount of income associated with the construction-work-in-progress which will be placed into service within one year of the assessment date. The income associated with the construction-work-in-progress shall be determined by multiplying the cost of said construction by the latest overall cost of capital as determined by the regulatory agency.

*c.* The income determined in 77.4(4) “*a*” shall be further reduced by that portion of the preferred dividends serviced by the income generated by the operating property, which shall be calculated by multiplying the total preferred dividend requirement by the ratio determined in 77.4(3).

*d.* The income determined in 77.4(4) “*a*” shall be further reduced by that portion of the debt service provided by the income generated by the operating property, which shall be calculated by multiplying the total debt service by the ratio determined in 77.4(2).

*e.* If there are any other interest payments required, a determination shall be made as to whether the underlying obligation was used to purchase operating or nonoperating assets. If no direct determination can be made, the interest payment shall be allocated in the same fashion as the debt service and preferred dividends. If the underlying obligation can be shown to be associated particularly, or in some specific proportion, to operating or nonoperating property, the interest payment shall be allocated either entirely or in such proportion to operating or nonoperating property. It shall be the obligation of the utility company, in its reports to the department, to identify and detail any interest payments which are particularly associated with operating or nonoperating property, and if the utility company fails to do so, the department may determine that all such payments may be allocated between operating and nonoperating property in the same ratio as is the debt service and preferred stock dividends (see subrules 77.4(2) and 77.4(3)).

*f.* The income determined in 77.4(4) “*a*” shall be adjusted by deducting any net income included therein received from nonoperating property and, conversely, the referenced income shall be increased to account for any net loss created by any nonoperating property.

*g.* The income determined in 77.4(4), paragraph “*a*,” for pipeline companies shall be further reduced by deducting the current year net adjustment expense for investment tax credits.

*h.* Any extraordinary item affecting the income determined herein shall be eliminated in the calculation of the income shown under this rule. Any construction-work-in-progress not placed into service within one year of the assessment date shall be separately valued by the department.

*i.* The equity rate of return for the utility company shall be determined by the use of the capital asset pricing model although where appropriate discounted cashflow model (commonly called the Gordon Growth Model -  $r = \frac{D_1}{P_0} + g$ ) may be utilized as an alternative.

Only in circumstances where these models are not able to be utilized will reliance be placed on a risk premium model or upon an earnings-price ratio, or other similar model, for determining the expected market rate of return on equity.

*j.* The income attributable to operating property available to the common equity holder as determined in 77.4(4) “*a*” to “*g*” shall then be divided by the equity rate as determined in 77.4(4) “*h*,” and the result shall be the market value of the common equity associated with the operating property.

**77.4(5)** In the event the utility company has entered into leases of operating property, the market value of the property leased shall be determined by calculating the net present value of the leases, which shall be accomplished by discounting the future lease payments for each lease. The following is offered as an illustration of the calculation of such market value:

Length of Lease	Annual Lease Payments
1. Lease (a) 5 years	\$1,500,000
2. Lease (b) 7 years	\$ 800,000
3. Lease (c) 3 years	\$ 120,000
Net present value of leases (assuming 8 percent rate)	

$$\begin{aligned}
 \text{Lease (a)} &= 1,500,000 \div (1.08)^1 + 1,500,000 \div (1.08)^2 \dots 1,500,000 \div (1.08)^5 \\
 \text{Lease (b)} &= 800,000 \div (1.08)^1 + 800,000 \div (1.08)^2 \dots 800,000 \div (1.08)^7 \\
 \text{Lease (c)} &= 120,000 \div (1.08)^1 + 120,000 \div (1.08)^2 \dots 120,000 \div (1.08)^3 \\
 \text{Net Present Value of Lease (a)} &= \$ 5,989,065 \\
 \text{Net Present Value of Lease (b)} &= \$ 4,165,096 \\
 \text{Net Present Value of Lease (c)} &= \underline{\$ 309,251} \\
 \text{Total Lease Values} &= \underline{\underline{\$10,463,412}}
 \end{aligned}$$

The discount rate shall be equal to the utility company's overall market cost of capital.

**77.4(6)** In the event the utility company has other sources of capital, such as (by way of illustration and not limitation) current liabilities and accumulated investment tax credits which cannot be identified as having been utilized to purchase specific assets, the market value of such sources of capital shall be allocated between operating and nonoperating assets in the same manner as long-term debt or preferred stock (see subrules 77.4(2) and 77.4(3)). Accumulated deferred income taxes are not included in this adjustment. The book value for accumulated deferred income taxes should be removed from the stock and debt approach before making this calculation. If any such source of capital was created specifically for the purchase of property which can be identified as operating property or nonoperating property, the utility company must identify such sources of capital in their annual report to the department, together with the appropriate evidence of such. If the utility company fails to provide such information, the department may determine that such sources of capital may be allocated in the same manner as long-term debt or preferred stock (see subrules 77.4(2) and 77.4(3)). The market value of any such source of capital, in the absence of evidence to the contrary submitted by the utility with its annual report, shall be the book value.

**77.4(7)** The value determined by summing the portions of the enumerated sources of capital associated with the operating property of the utility company provided in subrules 77.4(2) to 77.4(6) shall be the unit value of the operating properties determined by the stock and debt approach to unit value.

This rule is intended to implement Iowa Code sections 428.29, 433.4, 437.6, 437.7, and 438.14.